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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,811	10/29/2003	Hiroyuki Hayashi	18.014	2810
29453	7590	06/22/2005	EXAMINER	
JUDGE PATENT FIRM RIVIERE SHUKUGAWA 3RD FL. 3-1 WAKAMATSU-CHO NISHINOMIYA-SHI, HYOGO, 662-0035 JAPAN			COMPTON, ERIC B	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/605,811	HAYASHI ET AL.	
	Examiner	Art Unit	
	Eric B. Compton	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16 is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Invention I, claims 1-12 in the reply filed on March 14, 2005, is acknowledged.

2. Claims 13-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Objections

3. Claims 1-2 and 5-6 are objected to because of the following informalities: these claims recite "reducing the pressure of the environment surrounding the bearing unit to a first pressure or lower ..." However, these term first pressure or lower is ambiguous since it does not provide a reference point for lower pressure. Perhaps the limitation should read -- reducing the pressure of the environment surrounding the bearing unit to a first pressure [or] lower than atmospheric pressure—. See *also* claim 5-6 having similar problem. Appropriate correction is required.

4. Claim 2 is objected to because of the following informalities: the claim recites, "third step of" and "fourth step," but does not recite (implied preceding) first or second steps. Likewise, the claim recites "third volume of oil" and "fourth volume of oil," but does not recite (implied preceding) first or second volumes of oil. Appropriate correction is required.

5. Claim 3 is objected to because of the following informalities: the claim recites, "fourth step", but neither claim 3 nor claim 1, from which it depends, recite a (implied

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preceding) third step. Likewise, the claim recites "fourth volume," but the neither claim 3 nor claim 1, from which it depends, recite (implied preceding) second, or third volumes.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 5-6, 7-8 and 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims recite "in advance of said first/third step the environment surrounding the bearing unit not yet filled with oil is reduce to said first pressure or lower." However claims 1-2, from which they depend, recite "a first step/third step of, with the fluid-dynamic-pressure bearing unit not yet filled with oil, Thus, the above limitation is confusing with the earlier recited limitation, and is either ambiguous or redundant, since the same step, i.e., "reducing the pressure of the environment surrounding the bearing unit to a first pressure or lower" is being claimed "in advance" and/or essentially during the same step.

Claims 7-8 and 11-12 depend from claims 5-6, are therefore are also indefinite.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by WO02/48564 To Nakamura. Note: U.S. Pat. 6,733,180 is an English language equivalent.

Regarding claim 1, Nakamura discloses a method for manufacturing a fluid-dynamic pressure bearing (of the type claimed) comprising: a first step of reducing the pressure of the environment surrounding the bearing unit and injecting oil into the taper-seal area of the bearing unit; a second step keeping the environment surrounding the bearing at a pressure equal to that in the first step; and restoring to atmospheric pressure the environment surrounding the bearing unit. See Abstract.

Regarding claim 4, it is inherent that consecutive to at least a single cycle of the second step that pressure reduction of the environment surrounding the bearing unit is carried out.

Regarding claim, it is inherent that environment surrounding the bearing is reduced to a first pressure or lower and the environment surrounding the bearing is maintained at that state for a predetermined time period, at least during the first/third step.

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10. Claim 1, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 5,862,841 to Wuester, Sr.

Regarding claim 1, Wuester discloses a method for manufacturing a fluid-dynamic pressure bearing (of the type claimed) comprising: a first step of reducing the pressure of the environment surrounding the bearing unit and injecting oil into the taper-seal area of the bearing unit (see Col. 5, lines 30-34); a second step keeping the environment surrounding the bearing at a pressure equal to that in the first step (see Col. 5, lines 56-61); and restoring to atmospheric pressure the environment surrounding the bearing unit (for use).

Regarding claim 4, it is inherent that consecutive to at least a single cycle of the second step that pressure reduction of the environment surrounding the bearing unit is carried out.

Regarding claim 5, it is inherent that environment surrounding the bearing is reduced to a first pressure or lower and the environment surrounding the bearing is maintained at that state for a predetermined time period, at least during the first/third step.

Regarding claim 7, the reference discloses that the first pressure is 100 Pa or less and that the predetermined time is 10 seconds or more. See Col. 5, lines 61-63 (disclosing maintaining surrounding pressure for approximately 309 seconds); Col. 6, lines 7-11 (disclosing vacuum of 100 millitorr (13.3 Pa)).

11. Claims 1-6 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 08-270653 to NIPPON.

Regarding claim 1, NIPPON discloses a method for manufacturing a fluid-dynamic pressure bearing (of the type claimed) comprising: a first step of reducing the pressure of the environment surrounding the bearing unit and injecting oil into the taper-seal area of the bearing unit; a second step keeping the environment surrounding the bearing at a pressure equal to that in the first step, and restoring to atmospheric pressure the environment surrounding the bearing unit (for use). See Figure 7; JPO Machine Translation, [0022].

Regarding claims 2-3, in addition the reference discloses that excessive oil, corresponding to a fourth volume, may be removed from the bearing unit and discharged from the filling apparatus. See Figure 7; JPO Machine Translation, [0022].

Regarding claim 4, it is inherent that consecutive to at least a single cycle of the second step that pressure reduction of the environment surrounding the bearing unit is carried out.

Regarding claims 5-6, it is inherent that environment surrounding the bearing is reduced to a first pressure or lower and the environment surrounding the bearing is maintained at that state for a predetermined time period, at least during the first/third step.

Regarding claims 9-12, the reference notes that the sleeve is composed of an oil-impregnable porous substance, e.g., porous sintered alloy. See JPO Machine Translation, [0002].

Claim Rejections - 35 USC § 103

12. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over NIPPON in view of Wuester, Sr.

NIPPON discloses the invention above, but does not disclose the range of first pressure or predetermined time.

Wuester discloses the invention cited above. Like NIPPON it is inherent that environment surrounding the bearing is reduced to a first pressure or lower and the environment surrounding the bearing is maintained at that state for a predetermined time period, at least during the first/third step. The reference discloses that the first pressure is 100 Pa or less and that the predetermined time is 10 seconds or more. See Col. 5, lines 61-63 (disclosing maintaining surrounding pressure for approximately 309 seconds); Col. 6, lines 7-11 (disclosing vacuum of 100 millitorr (13.3 Pa)). Both NIPPON and Wuester, Sr. seek to reduce bubbles during filling.

Regarding claims 7-8, it would have been obvious to one having ordinary skill in that art at the time the invention was made to have preformed the vacuum filling step of NIPPON wherein the first pressure is 100 Pa or less and that the predetermined time is 10 seconds or more, in light of the teachings of Wuester, Sr., in order to properly ensure no bubbles are present during filling.

Prior Art References

The prior art references listed on the enclosed PTO-892, but not used in a rejection of the claims, are cited for their teachings of filling fluid-dynamic-bearings.

U.S. Pat. App. Pubs. 2003/0221317; 2004/0256178, 2005/0000092, & 2005/095195 disclose similar invention, but do not constitute prior art due to later effective filing dates.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (571) 272-4527. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Eric B. Compton

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Primary Examiner
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